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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,156	12/05/2001	John G. Sotos	021262-000110US	5725
20350 7590 04/19/2007 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER ROBERTSON, DAVID	
			ART UNIT 3623	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/007,156	SOTOS, JOHN G.	
	Examiner	Art Unit	
	Dave Robertson	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/08/2007 has been entered.

Response to Amendment

2. Applicant amends claim 1 to explicitly recite the intended use of the invention as directed to ranking expertise of entities having expertise in one or more subjects in a health care field. Claims 20, 34, and 35 are amended to correct informalities. Claims 1-39 are pending.

Response to Arguments

3. Applicant's arguments filed March 8, 2007 have been fully considered but they are not fully persuasive. The rejections of the prior office action are maintained, and new rejections over newly discovered prior art are added.

4. Applicant submits that reference to the submission of form PTO/SB/08A (i.e. patent listings) in Applicant's Information Disclosure Statement (IDS) of 05/24/2002 was in error, and that no PTO/SB/08A was submitted nor intended. It is accepted and noted that Applicant did not of with this IDS submitted any patents for consideration under 37 C.F.R 1.97 in the manner prescribed by 37 C.F.R. 198(a)(1).

5. As to the merits of the prior Office Action, Applicant argues the claims 1-5 and 10-38 rejected under 35 U.S.C. 103(a) as unpatentable over Milic-Frayling et al (US 2006/0059138) in view of the National Library of Medicine website ("NLM"), fail to disclose or suggest the present method of identifying and ranking entities having expertise in health care fields as recited in amended claim 1. Remarks, page 8. However, Milic-Frayling was not relied upon to teach searching documents in the health care field. See Office Action, page 5. Milic-Frayling was relied upon to teach the method of searching and scoring documents in a subject area, and ranking and displaying information about entities associated with relevant documents. The Office Action points out that recitation of document and expertise being in the health care field is intended use, and therefore carries no functional, patentable weight, and even if it were so, NLM demonstrates that such fields of search and motivation to find expertise using Milic-Frayling would have been known in the art at the time of invention to encompass the field of health care.

6. Applicant further argues that Milic-Frayling does not teach or suggest every feature of claim 1, specifically, the method of *ranking entities having expertise in one or more subjects in a health care field*. Rather, Applicant argues, Milic-Frayling discloses merely providing the user the ability to evaluate the relevance of a document, highlight keywords or phrases, and to rank the document based according to the user's needs, but does not identify or rank entities affiliated with each relevant document in one or more subjects in the field of health care. Remarks, page 9. Given Milic-Frayling in view of NLM teaches or suggests search, scoring, ranking, and display of expertise for the

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health care field (as above), one need only show that Milic-Frayling is teaches the method capable of operation for in the health care field. Milic-Frayling teaches internet document search and relevance scoring and information display, including *identification of entity names and entity relations (e.g. institutions)* (abstract and paragraphs [0013-0015]), where the user can highlight terms and obtain a second ranking of documents based on the first scores (the search relevance for the documents selected by subject, i.e. health care subject). Milic-Frayling specifically teaches that such terms may including company names, person names, location names, etc (see paragraphs 0013-0015] and especially [0088-0090]), and further extracting and listing of such entity names and entity relations in the documents..and providing information about the particular entity or entity relation which may include a link to a person or company website (i.e. a description of the person or company's expertise as is common in website designs). Thus motivated to seek information and expertise in a health care field, Milic-Frayling disclose a method and system as recited by the instant invention.

7. Applicant argues that claims 6, 19, and 30 are patentable over the art of record for reasons of claim 1, and further that Milic-Frayling et al (US 2006/0059138) does not teach or suggest a *third score* of geographic areas based on the second scores of entities. Here the Office Action relied on the disclosed inherent operation Milic-Frayling to teach obtaining a relevance score of a geographic area based on second scores, that is, so motivated, Milic-Frayling discloses a method of obtaining scoring of relevant documents and then rankings of entities, and then, in a further *iteration* on the results obtained, then scoring and ranking according to a user-term selected geographic area.

Milic-Frayling explicitly provides the motivation to so in suggesting the feature of treating as entities and thus scoring and ranking by "geographical features, countries, trademarks, etc. and typical or important relations among such entities." (see page 8, [0089]).

8. For reasons given above, Applicant's arguments having been considered but they are not fully persuasive, the rejections of the prior office action are maintained.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5 and 10-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milic-Frayling et al (US 2006/0059138) in view of The National Library of Medicine internet home page (www.webarchive.com from the year 2000), hereinafter referred to as "NLM".

As per claims 1, 30 and 39, Milic-Frayling teaches querying a database for documents relevant to a subject (paragraph 32, where the system can be operated on a variety of computer based systems, including data structures which would include databases); calculating a first score for each relevant document (paragraph 13, where the items are ranked which would require some sort of scoring system); determining entities affiliated with one or more relevant documents, each of the entities being

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affiliated with one or more documents in a set, at least one of the entities includes an institution or person affiliated with the set of the one or more documents (paragraph 14, where relevance is determined which is equivalent to affiliation as it performs an identical function in substantially the same manner with substantially the same results. See also paragraph 102 where summaries can be generated based on related articles, where a link is provided that allow the user to verify the relevance of the article. See also paragraph 8 where document text is used to identify and extract entities of particular interest, for example, a person's name, company names, locations, document relevance etc. The use of a person's name or company constitutes an affiliation or person affiliated.); calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity; ranking expertise of the entities based on the respective second scores of the entities (paragraph 13, where the document can be re-ranked according to a specific criteria from a prior search, where re-ranking would constitute some sort of scoring system); and displaying expertise associated with the respective entities to a user (paragraphs 14-16 where the user can chose a subject for search and a relevance assessment of the documents is provided. Additional information regarding the extraction of certain types of entity names or entity relations that are contained in the document can also be provided. The relevance assessment constitutes an expertise associated with the document.).

Milic-Frayling does not explicitly teach subjects in the health care field, but this is merely intended use. The recitation of the intended use or purpose of the claimed invention must result in a structural difference between the claimed invention and the

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prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use or fulfilling said purpose, then it meets the claim. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Still, NLM teaches that it is known to search documents in the health care field for expertise in health care (pages 1-8). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the document search system of Milic-Frayling with documents from the health care fields, such as in NLM, to provide means for finding articles related to this subject area.

As per claims 2-4 and 11-12, Milic-Frayling teaches ranking of expertise of the entities to a user, graphically depicting levels of expertise and numerically depicting expertise (paragraph 85, where the information is scored and listed accordingly). Official notice is taken that it is old and well known to use numbers or graphs to display the rank of items. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ranking system of Milic-Frayling with a numerical or graphical ranking system in order to provide a more user-friendly system.

As per claims 5, 10 and 34, Milic-Frayling teaches calculating a third score for each of the plurality of geographic areas based on the respective second scores of entities located within the each of the plurality of geographic area; and displaying expertise associated with each of the plurality of geographic areas to the user, based on the respective third scores of the plurality of geographic areas (paragraph 13, where the document can be re-ranked according to a specific criteria from a prior search, where re-ranking would constitute some sort of scoring system). The process is not limited in

number of times it can re-rank the results, and therefore, third scores would be encompassed by the re-ranking feature of Milic-Frayling. See also paragraphs 14-16 where the user can chose a subject for search and a relevance assessment of the documents is provided. Additional information regarding the extraction of certain types of entity names or entity relations that are contained in the document can also be provided. The relevance assessment constitutes an expertise associated with the document.

As per claims 13-18, Milic-Frayling teaches the first score is based on a type of the document (paragraph 85, where scoring (525) is one of several well known relevance matching functions with respect to the model of the user's interest).

As per claims 19-20, Milic-Frayling does not explicitly teach authors affiliated with the documents. NLM teaches that it is known the entities affiliated with one or more documents include authors of the one or more documents (pages 3-5). NLM is an analogous art as it also teaches about document retrieval. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the document system of Milic-Frayling with the author feature of NLM to provide a more comprehensive and user-friendly system.

As per claims 21-29, Milic-Frayling does not explicitly teach medical databases. NLM teaches that it is known that the database of documents is at least one of the Medlars databases (See page 2, where NLM provides free access to PubMed and Internet Grateful Med which connect to multiple medical databases). NLM is an analogous art as it also teaches about document retrieval. Therefore is would have

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been obvious to one of ordinary skill in the art at the time of the invention to modify the document system of Milic-Frayling with the medical database feature of NLM to provide a more comprehensive and user-friendly system.

As per claims 31-33, Milic-Frayling teaches the server is coupled to the database via the world wide network of computers (paragraph 65, where the user can search using the Web via a browser and paragraph 35: "Personal computer 20 may operate in a networked environment using logical connections to one or more remote computers such as remote computer 49. Remote computer 49 may be another personal computer, a server, a router, a network PC, a peer device, or other common network node. It typically includes many or all of the components described above in connection with personal computer 20; however, only a storage device 50 is illustrated in FIG. 1. The logical connections depicted in FIG. 1 include local-area network (LAN) 51 and a wide-area network (WAN) 52. Such networking environments are commonplace in offices, enterprise-wide computer networks, intranets and the Internet.").

As per claim 35, Milic-Frayling teaches the score is based on the number of authors associated with each of the documents (paragraph 47 where the linguistic and knowledge resources are used for identifying company names or author names). See also Figure 7 where the system can identify entity names and relations in the document (725), whereby this would be used in conjunction with paragraph 8 where a relevance assessment is made which constitutes a scoring based upon the names associated with the document.

As per claim 36, Milic-Frayling teaches the score is based on the type of document of each document relevant to each entity (paragraph 47 where the format recognition and content analysis would constitute means for assessing the document type). See also paragraph 60 where the format, or type, of document can be filtered as well.

As per claim 37, Milic-Frayling teaches the query is a geographical area (paragraphs 8 and 13 indicate location, or geography, as one of the search criteria that is scored as part of the ranked results).

As per claim 38, Milic-Frayling teaches the entity is selected from a hospital, university or author (paragraph 47 where the linguistic and knowledge resources are used for identifying company names or author names). See also Figure 7 where the system can identify entity names and relations in the document (725), whereby this would be used in conjunction with paragraph 8 where a relevance assessment is made which constitutes a scoring based upon the names associated with the document.

11. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milic-Frayling in view of The National Library of Medicine internet home page (www.webarchive.com from the year 2000), hereinafter referred to as "NLM", in further view of "Creating a CD-ROM: Overview of the product field. (CD-ROM authoring and data retrieval software packages; includes company directory and related article on resources for doing research)", Buyers Guide by Bernard Banet, Seybold Report on Desktop Publishing, v7, n6, February 1, 1993; hereinafter referred to as "Banet".

As per claim 6, neither Milic-Frayling nor NLM explicitly teach determining the author *and* institution of the document. However, Banet teaches that it is known to determine an author of the document (page 3, paragraph 4: "fields such as author, date, title, subject and so on"); and determining from what one or more institutions the document emanated (page 18, paragraph 10, where a bibliography is indicated which would contain institution or company information). Banet is an analogous art as it also teaches about document retrieval. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the document system of Milic-Frayling in view of NLM with the author/institution feature of Banet to provide a more comprehensive and user-friendly system.

As per claims 7-9, Milic-Frayling nor NLM explicitly teach determining the address. Banet teaches that it is known to examine an address of the determined author, where the address is a mailing address, where the address is an e-mail address (page 3, paragraph 6, where address or contact information is indicated). Banet is an analogous art as it also teaches about document retrieval. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the document system of Milic-Frayling in view of NLM with the address feature of Bernard to provide a more comprehensive and user-friendly system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Becerra-Fernandez, I. (the four (4) cited articles in the art from 1999 to 2001) discloses knowledge management "people-finder" methods and systems SAGE (Searchable Answer Generating Environment) and NASA Expert-Seeker having document search relevance expertise ranking for displaying expertise in a subject area.

The following patents are relevant to the methods and features of the present invention, however, may not teach and suggest all features or may be lacking priority date antecedence for the present invention:

Lawrence et al (US 6738780 B2) teaches autonomous citation indexing of documents available on the internet, implemented as CiteSeer.

Mascarenhas (US 20060161353 A1) teaches a computer-implemented searching using search criteria comprised of ratings prepared by leading practitioners in biomedical specialties and (US 20030014428 A) rating documents significance values according to taxonomy created by biomedical experts.

Braden-Harder et al (US 5933822 A) teaches a retrieval system for retrieving stored documents from a repository ranking documents associated with an output document set.

Koenig (US 7167855 B1) teaches an internet-based matching service for expert consultants and customers with matching of qualifications and times of availability.

Holbrook (US 6961731 B2) teaches organizing, clustering, and presenting information by search and organization of search results by category.

Byrd et al (US 5826260 A) teaches displaying document query results by ranking including displaying the ranking to the user by ranked order.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Robertson whose telephone number is 571-272-8220. The examiner can normally be reached on 8:15am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dcr



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